

A photograph of sand dunes with a starfish in the foreground. The dunes are illuminated by soft, low-angle light, creating long, rhythmic shadows that ripple across the sand. The sky is a pale, hazy blue. In the bottom right corner, a portion of a starfish is visible, its arms extending towards the center of the frame.

The STAR Project

(Student Transition and Retention)

**Bridging – Preparing international
and local students for final year BSc
Honours Studies**

**Peter Mitchell
University of Ulster**

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INTRODUCTION

The Student Progression and Transfer (SPAT) project highlights the importance of timely information and skills' development in the preparation of top-up students for entry to university where the curricula places more emphasis on student-centred and independently achieved learning outcomes (Carter, 2002). Whilst UK government policy on Higher Education widening participation speaks to this constituent, it is important to also recognize the needs of an increasing number of international Further Education students progressing to UK universities. Drawing on the international student exchange literature, Thomas and McMahon (1998) refer to the varied cultural, political and social experiences at institutions in different parts of the world, however, less is known about the transition of international students to award bearing Higher Education qualifications in the UK.

INSTITUTIONAL CONTEXT

BSc Hons Food Technology Management at the University of Ulster ran from 1988/89 to 1995/96 as a four year, sandwich placement programme, with a typical annual intake of 20 students. The course was first accredited by the Institute of Food Science and Technology (UK) in 1993 and still is, based on a re-appraisal in October 1999. In 1996, a top-up pathway, comprising a summer bridging course and the normal final year programme, was introduced. This pathway has helped build a truly international degree with students from the island of Ireland (local) and Hong Kong. The course was included in the Organismal Biosciences QAA Subject Review in November 1999, which was awarded 21 out of 24. In 2001, it was decided to only offer the programme as a top-up degree for students with a BTEC Higher National Diploma or equivalent qualification in a food related discipline. Today this top-up degree lies within a "Food, Nutrition and Dietetics" subject area, run by the School of Biomedical Sciences.

Between 1996/97 and 2002/03, 135 students (51 local and 84 Hong Kong) successfully bridged and graduated on the BSc Hons Food Technology Management top-up degree. In addition, 6 students successfully bridged over this period but either withdrew early on health grounds (1 local and 1 Hong Kong) or failed final year (4 local). This represents a 100% success rate on the bridging course, a 100% success rate in final year for Hong Kong students and a 92% success rate in final year for local students. Approximately

50% of these students can be classified as mature (22 years or above) and the gender balance for all students (141) favours female (88% local and 61% Hong Kong).

INTENDED OUTCOMES OF PRACTICE

The intended outcomes of the bridging course are to:

1. provide students with confidence in their new learning environment and a knowledge of the standard of work expected of a BSc Hons Food Technology Management graduate; and
2. enable them to start final year as well prepared as peers returning from a placement year.

In addition, the bridging course addresses the cultural adjustment of Hong Kong students to life at Ulster

OUTLINE OF PRACTICE

The focus of this case study is practice within a Transfer Module (credit level 2). This module requires 100 hours of student effort within the bridging course, and is considered effective in meeting the two above-mentioned intended outcomes. The Transfer Module builds on a number of pre-requisites, which are now outlined.

An analysis of the curricula for the feeder courses at the four Further Education Institutions (3 local and 1 Hong Kong) highlighted a close fit with the curriculum of the degree thereby allowing the bridging course to emphasise the development of transferable and graduate skills over subject specific knowledge. Good working relationships between the BSc Hons Food Technology Management Course Director and the leaders of all the feeder courses were established. A small team of academic and support staff who were committed to the delivery, evaluation and continuous improvement of the summer bridging course, and the ongoing support and pastoral care of students throughout final year of the degree, was formed. Finally, a cultural experience was designed to involve Hong Kong students in sight seeing, factory visits, events with local and other international students and an introduction to the University's host family programme.

The Transfer Module accounts for 90% of the bridging course efforts hours, with the remainder spent on the social induction programme. The module provides students with the opportunities to further develop their study, transferable and practical skills within the context of food technology management. A successful student will be able to show that he/she can:

Knowledge and Understanding

- K1 Draw on knowledge from prior learning in food technology management; and
- K2 Identify, obtain and analyse relevant literature on a topic in food technology management.

Intellectual qualities

- I1 Analyze, synthesize and summarize information critically, including published research;
- I2 Prepare a written scientific report, citing and referencing work in an appropriate manner; and
- I3 Analyze practice within a food company, against (technical standard/innovation) benchmarks.

Professional/practical skills

- P1 Record observations on technical standards and innovation in a food company;
- P2 Analyze a data set in food technology management using appropriate computer packages;
- P3 Present a scientific report in a format that complies with accepted conventions;
- P4 Present findings of an investigation in a essay format under examinations conditions; and
- P5 Use the internet critically as a source of information.

Transferable skills

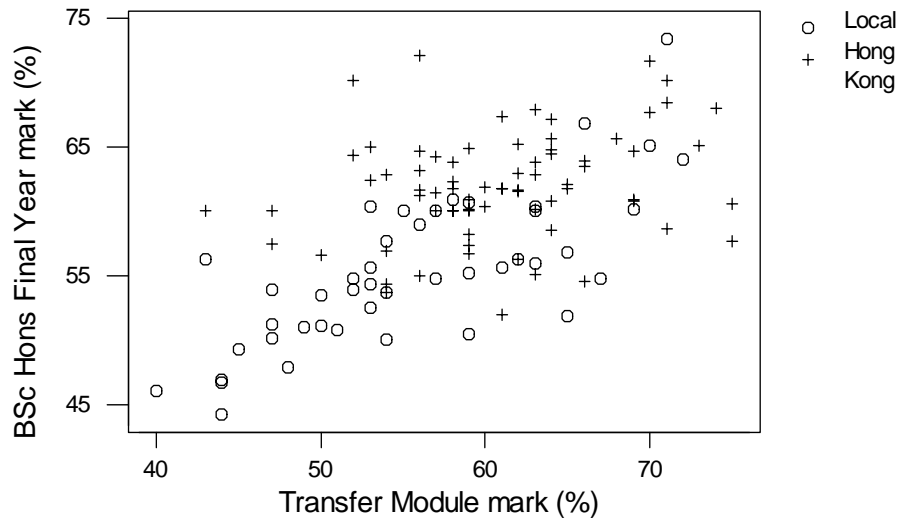
- S1 Communicate effectively in writing.

The module is delivered intensively over three weeks by lectures, tutorials, computer practicals and factory visits. Lectures cover study and transferable skills, and the subject background for the assessed written scientific report and an investigation of technical standards and innovation within a food company, which is assessed under examination conditions. Group and individual tutorials provide students with guidance in searching the literature, carrying out an investigation in a food company, presenting and interpreting data, writing scientific reports and standards of marking for examination questions. Each student meets twice with his or her assigned tutor. Practical require students to use Excel and SPSS to present and analyse relevant data.

EVALUATION OF PRACTICE

Since the introduction of the Transfer Module in summer 1998, 117 students (44 local and 73 Hong Kong) have successfully completed it and gone onto graduate with BSc Hons in Food Technology Management (Figure 1)

Figure 1 : Scattergram of performance of BSc Hons Food Technology Management top-up students in Final Year and the summer Transfer Module (98/99 to 02/03)



There is a highly significant correlation between the overall performance of local students in final year and their Transfer Module performance ($p=0.000$; R-sq (adjusted) = 56.1%) whereas there is no correlation in the performance of Hong Kong students. Based on student-staff consultations and the results of diagnostic tests (basic mathematics and chemistry concepts), a number of important factors have come to light, which help interpret the results in Figure 1. All Hong Kong students and not just some as in the case of local students have strong basic numeracy and scientific abilities, and furthermore, a strong motivation and commitment to their studies and to supporting their peers. As expected, many (local and Hong Kong) students possess weaknesses in the use of scientific literature, referencing and scientific writing and a number of Hong Kong students (academically weaker and stronger) are limited in their use of English and industry experience which present barriers to good performance in final year examinations. The good fit between previous course and degree, students' motivation and the time the Transfer Module affords for adjustment and confidence building, lead to good performance in the degree by Hong Kong students but the above mentioned barriers and strong peer support also produce a narrower range of final year performances. Although local students also highlight that they know what is expected of them in final year upon completion of the Transfer Module, it appears the follow up early in semester 1, final year by weaker students to address identified knowledge and skills gaps, with the support of their peers, is not happening.

FURTHER DEVELOPMENTS

A better training in scientific report writing should be provided in the Transfer Module by selecting a simpler, yet interesting and realistic data set within the food technology management context, and ensuring the students follow-up the feedback given by tutors. More basic mathematics and chemistry tutorial support and use of English workshops, early in the final year should be provided for local and Hong Kong bridging students, respectively.

CONCLUSION

The success of the Transfer Module (level 2, 100 effort hours) for top-up students entering BSc Hons Food Technology Management at the University of Ulster is built on a knowledge of the entry qualifications, a working relationship with transfer course leaders, staff commitment to student support and an additional cultural experience for Hong Kong students. The assessed Transfer Module, which emphasises study, investigative and transferable skills within the subject context, is most valued by top-up students for the time allowed to adjust to the new learning environment and confidence gained to commence final year degree studies “running”.

REFERENCES

Carter, C. (2002) SPAT - Student Progression and Transfer FDTL3 48/99. LTSN Bioscience Bulletin. Summer: 11.

Thomas, S. L. and McMahon, M. E. (1998). Americans abroad: student characteristics, pre-departure qualifications and performance abroad. *International Journal of Educational Management*. 12 (2): 57-64.

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